

## Page 6 LUC-307/Olmstead 3-1-1-2 amendment

**Remarks**

Reconsideration is requested of the application in which claims 1, 4, 6, 7, 16, 21, and 25-26 remain pending. In view of the Office Action having been made final, no amendments are tendered by this communication.

Claim Objection:

Claim 1 was objected to with regard to the recitation of "GMSC2" and "HLR". The objection states that there is insufficient antecedent basis for these terms. Thus, this objection is made based on 35 U.S.C. 112, second paragraph, which requires that the claims particularly point out and distinctly claim the subject matter which applicant regards as his invention. Based on the numerous issued U. S. patents that include the use of abbreviations in the claims, it is clear that the use of abbreviations is permitted in claims. Therefore, this objection must be considered from the viewpoint of whether the abbreviations are defined so that one of ordinary skill the art upon reading the claim would understand the meaning of the abbreviation. In lines 3- 5 of claim 1 it is recited: "a gateway mobile switching center of the first network (GMSC1) to a gateway mobile switching center of the second network (GMSC2)". In line 6 of claim 1 it is recited: "a home location register (HLR)". Applicant has thus clearly defined the meaning of the subject abbreviations and provided appropriate antecedent basis for later reference to GMSC1, GMSC2 and HLR in claim 1. It is believed that claim 1 is in compliance with 35 U.S.C. 112, second paragraph, and the objection to claim 1 should be withdrawn.

Claim Rejections - 35 U.S.C. §103:

Claims 1, 4, 16 and 21 were rejected under 35 U.S.C. §103 in view of Mills (U.S. Patent No. 5,890,063) and Ahrens (U.S. Patent No. 5,848,144). Applicants respectfully traverse the rejections as explained below. The discussion of certain differences between the claimed invention and the references is in no way meant to acquiesce in any characterization that one or more parts of the applied references not discussed correspond to the claimed invention.

## Page 7 LUC-307/Olmstead 3-1-1-2 amendment

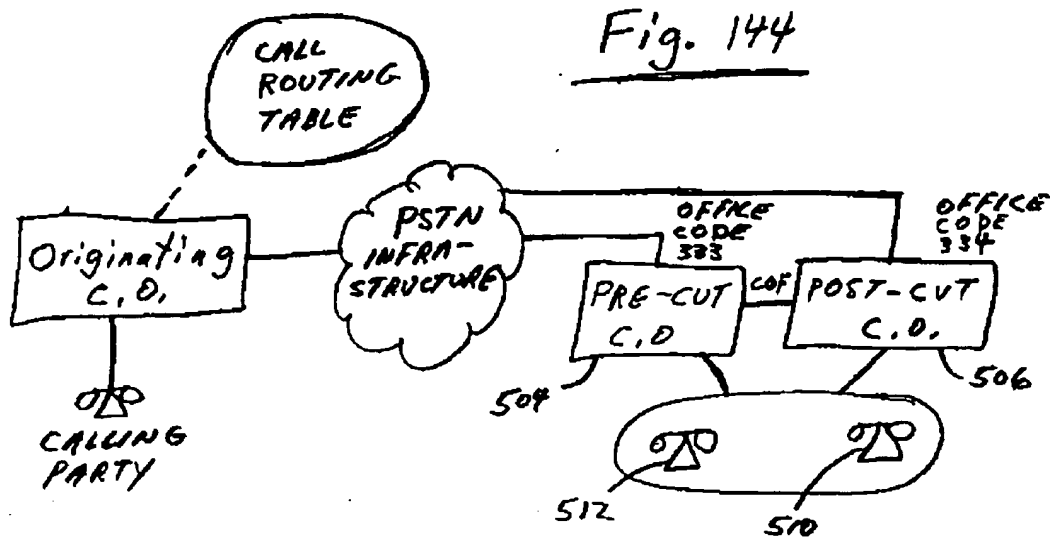
Claim 1 is directed to a method of migrating subscribers from a first network to a second network. At least one connection is transferred from at least one other network from a GMSC1 to a GMSC2. An HLR in the second network is updated with routing information about subscribers now served by the second network. All call requests are sent from the at least one other network for subscriber served by one of the first and second networks directly to the GMSC2. The second network employs a different network technology than the first network. The GMSC2 queries the HLR of the second network for routing information for a destination subscriber upon receiving a call request without requiring routing information obtained by a prior query to an HLR of the first network. If routing information for the destination subscriber is available from the HLR in response to the query, the GMSC2 routes the call to the second network. If no routing information for the destination subscriber is available on the HLR in response to the query, the GMSC2 routes the call to the first network.

Regarding the rejection of claim 1, it was acknowledged in the Office Action that call requests in Mills are directed to the first GMSC, in contrast to the claimed invention where all call requests are sent directly to the second GMSC in a system having two networks with separate HLRs. Ahrens is relied upon as teaching this limitation. It is stated in the Office Action, referring to the teachings of Ahrens:

"Further, after a midpoint of migrating subscribers, all traffic is routed to the post-cut switch (see figures 3 and 5a-5d), which reads on the claimed invention that directs all call requests directly to the switch of the second network. The result in combination reads on the claimed 'querying the HLR by the GMSC2 for routing information for a destination subscriber upon receiving one of said call requests where the GMSC2 queries the HLR without requiring routing information obtained in response to a query to the another HLR' ".

An understanding of how calls are routed in the public switched telephone network is important background information that is required in order to understand the teachings of Ahrens as relevant to the claimed invention according to claim 1. This background information is important and relevant under the *Graham v. Deere* criteria because one of ordinary skill in the telecommunication art would interpret the teachings of Ahrens in accordance with such a background. Hence, a basic summary of call routing the public switched telephone network is

provided with reference to the below FIG. 144 provided by applicant. Reference numerals in FIG. 144 identify elements common with FIG. 5 of Ahrens.



Ahrens is concerned with cutting over wireline subscribers from one central office switch to another central office switch. The primary objective of Ahrens is to minimize the bandwidth and call handling capacity required by the cut over facility (COF) that links the pre-cut and the post-cut switches. At least some portion of the subscribers originally supported by the pre-cut switch 504 will be transitioned to be supported by the post-cut switch 506. In FIG. 144 the pre-cut switch has an office code 333 and the post-cut switch has an office code 334. From the perspective of an originating switch from which an originating call was placed to a subscriber supported by one of switches 504 and 506, the originating switch must obtain call path routing from a call routing table which is contained in the illustrative node.

As an example, assume that the calling party initiates a call to subscriber 512 supported by switch 504 by dialing a directory number having an office code of 333. The originating switch upon receiving this call request consults the call routing table node to obtain call routing

## Page 9 LUC-307/Olmstead 3-1-1-2 amendment

to switch 504 based on the office code 333. If subscriber 512 is still supported by switch 504, then the call will be routed through switch 504 to the subscriber. If subscriber 512 has been transitioned to switch 506, even though the subscriber still retains a directory number with office code 333, the call will still be routed to switch 504 and will link the call through the cut over facility (COF) to switch 506.

Now assume that the calling party initiates a call through the originating central office to subscriber 512 following the final cut over such that subscriber 512 is now directly supported by post-cut switch 506. It is assumed that the directory number of subscriber 512 has been changed to 334 as part of the cut over procedure, i.e. subscriber 512 previously had a directory number with an office code of 333. In this situation, the call routing table contained in the call routing table node will have been updated to reflect office code 334 as a valid office destination so that calls placed to subscriber 512 with an office code 334 will now receive call path routing to switch 506. Thus the call will be routed through the PSTN infrastructure directly to switch 506 for termination to subscriber 512.

With regard to the limitations of claim 1, it is important to note in Ahrens that AT ALL TIMES (prior to cut over, during the cut over transition, and post cut over) the call routing table contained in a single call routing table node is always consulted to obtain call routing information. Even though a hardwired call path diversion between switch 504 and switch 506 is in place during the cut over transition, this has no impact on where and how information is derived for call path routing. That is, the same call routing table contained in its node is ALWAYS CONSULTED for call path information. Because the same call routing table is always the source of call path routing information in Ahrens, even during a cut over transition from one wireline switch to another switch, the teachings of Ahrens is analogous to call routing in a single mobile network having only a single HLR, i.e. only one call routing table is used. One of ordinary skill in the art would not be taught anything based on Ahrens regarding how to solve problems encountered in call routing between two separate independent mobile communication networks each utilizing separate HLRs.

Page 10 LUC-307/Olmstead 3-1-1-2 amendment

Claim 1 recites an HLR in the second network and another HLR in the first network.

Claim 1 further recites:

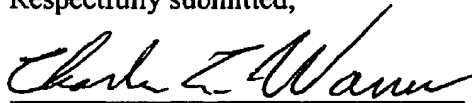
querying the HLR [of the second network] by the GMSC2 for routing information for a destination subscriber upon receiving one of said call requests where the GMSC2 queries the HLR [of the second network] without requiring routing information obtained in response to a query to the another HLR [of the first network];

It was acknowledged in the Office Action that Mills did not provide a teaching of this requirement. Ahrens does not supply this teaching as explained above, and hence the teaching attributed to Ahrens in the first paragraph on page 4 of the Office Action is inaccurate. The rejection of claim 1 under 35 U.S.C. 103 based on the combination of Mills and Ahrens should be withdrawn since neither reference supplies the required teaching.

Independent apparatus claim 16 is believed to be allowable for similar reasons discussed above with regard to claim 1.

If a telephone conference would be of assistance in advancing the prosecution of this application, the Examiner is invited to call applicants' attorney at 630-584-9206.

Respectfully submitted,



Charles L. Warren  
Attorney for Applicant  
Reg. No. 27,407

Dated: January 11, 2006

CARMEN B. PATTI AND ASSOCIATES, LLC  
Customer Number 32205